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## CINNAMON, CASSIA AND SOMALILAND

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THE ANCIENT SEMITES sometimes took their tribal totems from trees, which they thought of as animate. The leaves, bark, gum or wood of such trees they conceived as preserving the attributes of the tree itself. Thickets, groves or forests of such trees were sacred places, to trespass in which was disastrous. Setting fire to such a thicket to bring the ground under cultivation is said, in more than one Arabian story, to have brought about the departure of spirits of the trees in the form of flying serpents who brought death to the intruders. From very early times certain trees and plants were thought to possess special virtues for ceremonial purification, and it is not impossible that such uses antedated animal sacrifice as a means of atonement to the higher powers.<sup>1</sup> Echoes of such beliefs may be found in the Old Testament fable of the trees that chose the bramble to be their king.<sup>2</sup>

Among known products of Arabia, those especially valued for purposes of purification were the lemon grass (*idhkkhir*)<sup>3</sup>—of which the woody root is more fragrant than the hollow stem (*Andropogon schoenanthus*)—which grows tall and strong in the valleys of streams in both Arabia and Somaliland; the senna (*Cassia angustifolia*), a leguminous shrub native in the Somali uplands; the myrrh (*Balsamodendron myrrha*), a small tree whose rudimentary leaves offer little evaporating surface to the blazing sun of its native uplands; the acacia (*Acacia seyal*), yielding a valued hard wood and a gum of specific virtue; the balsam (*Balsamodendron gileadense*), a poorer cousin of the myrrh; the sweet flag or calamus (*Acorus calamus*); the ladanum or rock rose (*Cistus villosus*); the fragrant blooming *kadi* or screw pine (*Pandanus odoratissimus*); and most valued of all, the frankincense (*Boswellia Carterii*), a fully-leaved small tree which requires more water than the myrrh and grows therefore in val-

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<sup>1</sup> W. Robertson Smith, *The Religion of the Semites*, 133; cf. Herodotus, 3. 107.

<sup>2</sup> Judg. 9. 8. *sqq.*

<sup>3</sup> Smith, *op. cit.* 142.

leys at the base of hills, which attract some of the moisture of the monsoons, around the enclosed bays of South Arabia and the valleys of the Horn of Africa.

So firmly rooted was the belief in the efficacy of the lemon grass that Mohammed, in making his reservations of sacred land in Arabia, on which it was forbidden to cut fodder, fell trees, or hunt game (the natural products of the holy soil being exempt from human appropriation), was compelled, we are told by Robertson Smith, to except the lemon grass because of an ancient custom that allowed it to be cut for certain purposes, 'for entombment and purification of houses,' uses which persist to the present day.<sup>4</sup> Myrrh also had its peculiar uses for the entombment of the dead; senna and frankincense for the purification of the living. Ritual observance in various faiths in our own day calls for a strict fast before partaking of the sacrament. In more primitive times, and even today, as Robertson Smith shows of the Masai in East Africa,<sup>5</sup> such observance requires not only fasting, but the use of strong purges that the body may contain nothing unclean and the individual thus more surely make his atonement. Such was, probably, one of the objects of the formulae of the Babylonians quoted by Dr. Jastrow, which depended apparently upon senna as a prime ingredient.<sup>6</sup>

Frankincense had a religious value greater than the rest, whether its odor was used in the form of ointments or was produced by burning the gum as an altar sacrifice. No other product of antiquity was collected with such strict religious precautions. The *Periplus* tells us that it could be gathered only by certain individuals;<sup>7</sup> Pliny adds that they must be men upright in life, living in celibacy during the gathering season;<sup>8</sup> and Marco Polo tells of the islands off the south coast of Arabia<sup>9</sup> whereof one was reserved for the women and the other for the men during the gathering season.

Such, in brief, were the principal media of purification of the early Semitic world. The demand for them in neighboring coun-

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<sup>4</sup> Smith, *op. cit.* 142.

<sup>5</sup> Smith, *op. cit.* 434.

<sup>6</sup> *Trans. Roy. Soc. Med.* 7. 2. 133.

<sup>7</sup> *Periplus*, 29. 32.

<sup>8</sup> Pliny, *H. N.* 12. 30.

<sup>9</sup> Marco Polo, 30. 31.

tries gave a very early impetus to international commerce. Egyptian records as early as the 5th Dynasty tell of Punt expeditions yielding incense and aromatics. The well-known Punt reliefs of the 18th Dynasty tell of frankincense and myrrh, ointments and fragrant woods.<sup>10</sup> Babylonian and Assyrian tribute lists tell of the same substances, and of leaves used for the ceremonial purgatives.<sup>11</sup> It is here that the literary tradition brings in the words, cinnamon and cassia, which refer today to the bark and wood of the tree laurel of India and tropical Asia (*Cinnamomum tamala*). But it would seem that such reference is not borne out by the original texts.

The occasion for this doubt is the well-known fact that laurel varieties will not grow where lime is present in the soil, that they require considerable moisture, and the tree laurel in particular abundant seasonal rainfall.<sup>12</sup> In the Somali peninsula, which the Greeks and Romans thought to be the home of the cinnamon, calcareous rock is everywhere found, the uplands being thereby arid, while calcareous clay is characteristic of the river bottoms. These conditions, with scanty rainfall and high average temperature, make it improbable that laurel varieties ever grew there. The same testimony is furnished alike in geological history and in modern exploration. Fossil cinnamomums are found in Asia but not in Africa.<sup>13</sup> R. E. Drake-Brockman, a British officer stationed at Berbera, made special inquiries some years ago at my request, interviewing Somali traders from all the caravan routes and showing them cinnamon bark, wood and leaf. He found them utterly ignorant of any such product,<sup>14</sup> and writes, 'had cinnamon been a product of the Horn of Africa it is hardly reasonable to suppose that it would have so completely disappeared. I have never met with it in any part of the interior, nor do those Somalis who are acquainted with the imported article know of the existence, even of an inferior quality of it. Frankincense and myrrh are collected today, as they were two or three thousand years ago, in what is now British Somaliland.'

A recent Italian expedition headed by Bricchetti explored all

<sup>10</sup> Breasted, *Ancient Records of Egypt*, 1. 161; 2. 265, etc.

<sup>11</sup> Cf. Harper, *Assyrian and Babylonian Literature*, pp. 52, 134-136, etc.

<sup>12</sup> Watt, *Commercial Products of India*, pp. 311-313.

<sup>13</sup> Engler and Prantl, *Die natürlichen Pflanzenfamilien*, 3. 3. 157-163.

<sup>14</sup> *British Somaliland*, pp. 6, 8, 9.

parts of Italian Somaliland, bringing back a full botanical collection, reported on by Professor R. Pirotta of Rome, in which no laurel varieties appear.<sup>15</sup> Similarly negative results are found in subsequent Italian colonial reports. Mr. S. E. Chandler, of the Imperial Institute, in a recent letter expresses similar views: 'The crux of the question is whether any Lauraceous bark was, or could have been, obtained from the indigenous flora from the Horn of Africa. So far as I can ascertain, the answer is in the negative. No *cinnamomums* occur in tropical Africa.' On this opinion Mr. H. W. Dickinson, of the Science Museum, South Kensington, observes: 'He practically negatives the possibility that any tree of the cinnamon-bearing laurel variety could have been obtained from the Horn of Africa.' The researches of Robertson Smith apparently yielded nothing concerning cinnamon, which does not appear among his lists of ceremonial substances valued by the ancient Arabs. The literary tradition, however, is explicit as to substances bearing the names, cinnamon and cassia. The explanation may be found by inquiring into the significance of the names themselves.

So far as the Egyptian reliefs are concerned, Dr. Breasted informs me, the translation, cinnamon, is merely hypothetical, the original being *tyspsy* from the root *spsy*, meaning 'to sweeten': so that the word designates nothing more than a wood or product of fragrant or agreeable taste.

In a list of commercial substances clearly of ceremonial application in Ezekiel we find as products of South Arabia קרה and קנה translated in our English versions as cassia and calamus.<sup>16</sup> In the LXX the verse is lacking, but קרה appears as *κασία* among the products of Judah. The קנה may be either the sweet flag or the lemon grass. קרה, possibly connected with a root קרר 'to cut', suggests rather the Babylonian *kasu*, the Somaliland senna.

This leguminous shrub, still known botanically as *Cassia* and native in the Horn of Africa, reaches the market in two forms—the long, stiff pods, and the tender leaves. The pods are gathered from the plant and tied in bundles without covering. The plant is cut down and spread in the sun to dry. The leaves are

<sup>15</sup> Bricchetti, *Somalia e Benadir*, pp. 628-629, 700-726.

<sup>16</sup> Ezek. 27. 19.

then stripped off and packed in bags. Senna reaches the market in both forms, and from the same places, to this day, and is described in the pharmaceutical books as *folia sennae* and *folliculi sennae*.<sup>17</sup> A dealer in drugs tells me that he is now carrying 'Tinnevelly pods' (Somali senna) for the first time to meet the insistent demand of Russian Jewish women; a curious survival indeed, if that race came originally from South Arabia.

The tabernacle specifications in Exodus,<sup>18</sup> probably later in their present form than the text of Ezekiel, give in this connection three substances—קנה, קרה and קנמן, rendered by the LXX κάλαμον, ἴρις, and κιννάμωμον. The rendering *iris* is interesting, this being the orris root of commerce noted by Theophrastus<sup>19</sup> as an ingredient of sacred ointments among the Greeks, but found by them much nearer home than Arabia. Κιννάμωμον raises at once our question of the laurel product to which the word is now applied. The Hebrew form קנמן-בשם suggests not only that the substance was sweet, but also that there might be a קנמן that was not sweet; and the form קנמון may possibly be a verbal noun derived from a root קנם, to set up, erect or bundle, applicable to any product brought in that form by the caravans, including the roots of the lemon grass. There is, of course, some doubt as to the existence of such a root, but a similar form קנן means, to set up, build up, and hence to nest; and Herodotus seems to have such a meaning in mind when he says that 'cinnamon comes from great birds' nests in India.<sup>20</sup> That the form of the package is still considered in commerce, I note from a modern specification for licorice coming from a merchant in Valencia, Spain, which passed over my desk a few days ago: 'Natural, in branches, completely dried, in bales, perfectly fastened, without burlap.' In a Psalm of uncertain date<sup>21</sup> we have the words קציעות and אהלות rendered by the LXX κασία and στακτή (a word applied alike to myrrh and balsam) and in a passage in Proverbs,<sup>22</sup> קנמן and אהלים rendered by the LXX

<sup>17</sup> Flückiger and Hanbury, *Pharmacographia*, art. 'Senna'.

<sup>18</sup> Exod. 30. 23-24.

<sup>19</sup> Theophrastus, H. P. 9, 9, 2.

<sup>20</sup> Herodotus 3. 110.

<sup>21</sup> Ps. 45. 8.

<sup>22</sup> Prov. 7. 17.

κιννάμωμον and κρόκινον, saffron (*Crocus sativus*), an interesting reading again suggesting substitution of a substance found nearer the Greek world. Finally in the late text of Ben Sira<sup>23</sup> we have in a list of ceremonial perfumes, κιννάμωμον and ἀσπάλαθος, but no cassia. *Aspalathus* (*Genista acanthoclada*) is an aromatic shrub native in Palestine; so that in Ben Sira's day, notwithstanding the maritime trade of the Red Sea was far more active than formerly, the products of the south were not exclusively specified for the 'sweet savor unto the Lord.'

The Hebrew writings give us, then, two substances: קנמן things bundled; and קרה things cut; with a variant, קציעות things stripped. The difference no doubt was that the first, whatever its nature, could be tied to a camel's back as a fagot or bundle of twigs, sticks or roots, while the second had to be packed in bags.

The Greek geographers knew little of Arabia, but they diligently pieced together their scraps of information in a definite form, hardly warranted by the material. The Persian Empire had established for the first time a sovereignty coterminous with the Greek and the Hindu worlds, and a Greek adventurer<sup>24</sup> in the employ of a Persian monarch had demonstrated the feasibility of navigation between India and Egypt. Following the conquests of Alexander, this sea trade was steadily developed, but principally by Arabian and Indian enterprise, for the Greeks give us mainly second-hand information until after the Christian era. Herodotus,<sup>25</sup> who had personally visited both Babylonia and Egypt, mentions κασία as a spice brought from Arabia, and remarks that the Greeks took the word κιννάμωμον from the Phoenicians as an equivalent to κάρφεια, cut sticks, apparently still making the distinction primarily from the form of package. One of the earliest Greek geographers to give us details of trade is Agatharchides,<sup>26</sup> a tutor of one of the Ptolemies, perhaps librarian of Alexandria, who had an attractive literary style but no personal knowledge of lands beyond Egypt. He links together, in a passage describing the region of the elephant hunts, κάρδαμον and palm; again,

<sup>23</sup> Ecclus. 24. 15.

<sup>24</sup> Scylax of Caryanda: Herodotus, 4. 44.

<sup>25</sup> Herodotus, 2. 86; 3. 111.

<sup>26</sup> Agatharchides, ap. Diod. 84. 103; ap. Phot. 87, 97, 101, 102, 103, 110.

among products brought to Palestine by the South Arabian caravans, he mentions frankincense. He describes the country of the Sabaeans as a land yielding balsam and cassia, having great forests of myrrh and frankincense, with *κινναμόμον φοίνιξ* and calamus. This cinnamon-palm suggests the *kadi* of Yemen, which Glaser<sup>27</sup> proposed to identify with the קדרה of Ezekiel; though for that I should rather suggest *idhkkhir* or lemon grass. Herodotus says that cassia 'grows in a shallow lake,'<sup>28</sup> suggesting a rush or grass of some sort. Agatharchides goes on to tell of the great wealth of the Sabaeans derived from their trade in incense and aromatics, and of the enervating effects of their spicy breezes—a romantic flourish, derived perhaps from taboo, but effectively used by Milton in his *Paradise Lost*.<sup>29</sup> He refers elsewhere to ship-building industry at the mouth of the Indus.

Artemidorus copied from Agatharchides, and Strabo<sup>30</sup> in turn from Artemidorus without other knowledge of the eastern sea trade than he could obtain by talking with Alexandrian merchants who told him that about 120 ships sailed from Myos-hormos to India. Strabo takes for granted the Sabaean forests of Agatharchides without locating them. The military expedition of Aelius Gallus penetrated as far as the Sabaean capital in Strabo's day. The commander was Strabo's friend, and personally told him the details of the enterprise. As they reported no spice forests, Strabo says only that the expedition turned back two days' journey from the land of spices. Indeed this mythical forest which Strabo pushes out at first in South Arabia, and finally in the Horn of Africa to Cape Guardafui itself, reminds one very much of the Western Sea where the sun sets,<sup>31</sup> which similarly recedes in the Chinese Annals from Lop-Nor to the mouth of the Tagus. Cinnamon, cassia and other spices, he says, are so abundant in the land of the Sabaeans that they are used instead of sticks and firewood; and again, pitch (perhaps balsam) and goats' beards are burned to ward off the noxious effects of the spicy atmosphere.<sup>32</sup> Herodotus has a similar story about safeguarding the frankincense

<sup>27</sup> *Skizze*, p. 41.

<sup>28</sup> Herodotus 3. 110.

<sup>29</sup> 4. 156-165.

<sup>30</sup> Strabo, 16. 4. 19; 3. 5. 12; 16. 4. 22-24.

<sup>31</sup> Hirth, *China and the Roman Orient*, pp. 51, 77; *Chau Ju-kua*, p. 153.

<sup>32</sup> Strabo, 16. 4. 19; cf. Smith, *op. cit.* 325, 331.



gatherers by burning styrax.<sup>33</sup> Here, surely, we have echoes of Semitic sacrifice and purification ritual, further suggested by the statement that the gatherers wear skins, evidently from the sacrificial victims. The country of the Sabaeans, he says, produces myrrh, frankincense and cinnamon (evidently copying from Agatharchides' cinnamon-palm), while along the coast are found balsam, sweet-smelling palms, calamus, and another kind of herb of very fragrant smell, but which is soon dissipated. Thus far Arabia. On the African side<sup>34</sup> he brings us to the frankincense country with its promontory, temple and grove of poplars, its rivers Isis and Nilus, both producing myrrh and frankincense, beyond which lies the tract that bears the false cassia, frankincense, and in the interior, cinnamon, from which flow rivers which produce rushes in abundance (probably the lemon-grass). We have here a word 'cinnamon' taken from Agatharchides who applied it to a palm, and referred to Cape Guardafui as the extreme limit of Strabo's nautical knowledge. But he says also that cassia was 'the growth of bushes,' and that, according to some writers, 'the greater part of the cassia is brought from India.' Nothing that Strabo says of the cinnamon identifies it clearly with the laurel family; nor, indeed, is this the case until we come to the author of the *Periplus*, who, after the countries yielding myrrh and frankincense, describes Ras-Hafun below Cape Guardafui as a place where cinnamon was largely 'produced,'<sup>35</sup>—a phrase which can be applied to a transit trade, such as other items in the list would indicate this to have been. This led Cooley to conclude that there was near the eastern coast below Cape Guardafui a

<sup>33</sup> Herodotus 3. 107; cf. Smith, *op. cit.* 437.

<sup>34</sup> Strabo, 16. 4. 14.

<sup>35</sup> *Periplus*:—8 (Malao) 'Εκφέρεται... κασσία σκληρότερα καὶ δούακα καὶ μάκειρ, τὰ εἰς Ἀραβίαν προχωροῦντα.

10 (Mosyllum) 'Εξάγεται... κασσίας χρέμα πλείστον (διὸ καὶ μειζόνων πλοίων χρήζει τὸ ἐμπόριον) καὶ ἄλλη εὐωδία καὶ ἀρώματα... (Cassia trade meant larger ships).

12 (Aromatum emporium) Προχωρεῖ... τὰ προεξημένα· γίνεταί δὲ τὰ ἐν αὐτῇ κασσία καὶ γίλειρ καὶ ἀσύφη καὶ ἄρωμα καὶ μάγλα καὶ μοτῶ καὶ λίβανος. (An import and export list in which γίνεταί can stand for ἐκφέρεται; while γίλειρ may represent *idhkhir*.)

13 (Opone) εἰς ἣν καὶ αὐτῇ γεννᾶται κασσία καὶ ἄρωμα καὶ μοτῶ καὶ δουλικὰ κρείσσονα, ἃ εἰς Αἴγυπτον προχωρεῖ μᾶλλον... (a transit trade, so indicated by the slaves alone).

range of hills having silicious rock and soil and a sufficient rainfall to grow the tree laurel.<sup>36</sup> This was merely inference and is not borne out by the Italian explorations. The question could, no doubt, be settled definitely by local examination of the Wadi Darror, which empties on the coast just below Ras-Hafun.

The description of the author of the *Periplus*<sup>37</sup> is of the laurel product known to us as cinnamon; he calls it *κασσία* throughout. It could have been brought to Cape Guardafui in the Indian ships he saw there. In describing the exports at the ports of India he uses, not this word, but *μαλάβαθρον* (*tamalapatra*, or leaf of the *tamala* tree, the botanical *Cinnamomum*).<sup>38</sup> This *μαλάβαθρον* was one of the most treasured ingredients of ointments in the Roman world, but was much confused with *νάρδος*, a name in which there was also confusion as between the spikenard (*Nardostachys jatamansi*), a tall herbaceous plant of the western Himalayas, and the citronella (*Andropogon nardus*), a near cousin to the lemon grass of Arabia.<sup>39</sup> Strabo says in one passage that 'the same tracts produce cassia, cinnamon, and nard.'<sup>40</sup> A modern description of the essential oil distilled from one of these Indian grasses is that 'its odor recalls cassia and rosemary, but a strong persistent odor of oil of cassia remains.' This recalls Pliny's description of cinnamon as the spice, sweet as a rose but hot on the tongue<sup>41</sup> (which he seems to connect with Guardafui as a product merely transshipped there), and since his day the words, cinnamon and cassia, have been applied exclusively to the tree laurel of India. Before the opening of regular sea trade from India which led in turn to the sudden wealth of the Sabaeans in the second century B. C., there is no proof that this South and East Indian spice reached the world's markets or was meant by the words, cinnamon and cassia. *Cassia* leaves or strippings is clearly senna in the Babylonian records. Laurel bark is not purgative, but astringent, and does not fit the case at all. In Ezekiel it is uncertain whether senna or lemon grass is meant; the latter, more probably. In the Psalms and Proverbs lemon grass,

<sup>36</sup> *JRAS* 1849; 19. 166-191.

<sup>37</sup> *Periplus*, 56, 63.

<sup>38</sup> Watt, *op. cit.* 311-313.

<sup>39</sup> Watt, *op. cit.* 450-462.

<sup>40</sup> Strabo, 16. 4. 25.

<sup>41</sup> Pliny, *H. N.* 6. 29.

sweet flag or some such fragrant substance is indicated. Cinnamon, things bundled, in Exodus may be the roots of the lemon grass, or the sweet flag; in Babylonian records and elsewhere, the pods of the senna. Cassia itself could be a hollow grass, for Galen translates it as σῦριξ or reed.<sup>42</sup> Cinnamon, as Herodotus said, was merely another word for cut sticks. It is only by a secondary interpretation that it becomes 'pipe', or that the idea of a pipe is applied to the tender rolled-up bark of the tree laurel. These caravan terms have gone through a course similar to that of the ספיר, which began as the blue jasper of Egypt, then became the σάμφειρος or lapis lazuli of Media and Badakshan, and finally the sapphire, or blue corundum of Ceylon. The weight of evidence is against any production of laurel cinnamon in 'Panchaia, with its incense-bearing sands';<sup>43</sup> and in its bearing on the question of the antiquity of sea trade in the Indian Ocean it may be said that if cinnamon was laurel, it came from India: if it grew in Somaliland, it was not laurel.

The mediaeval Arab geographers are almost as indefinite as their Greek predecessors. Abū'l-Faḍl Ja'far, a twelfth-century writer, correctly connects nard (*sunbul*) with lemon-grass (*idhkkhir*) and speaks of a 'swallows' nard' from India that suggests the birds' nest of Herodotus. Ibn-al-Baiṭār, whose drug treatise of the thirteenth century contains much useful information, lists cinnamon under *Dar ġinī*, 'Chinese tree' (a curious title if the product had ever originated in Arabian territory) and distinguishes *dar ġinī ad-dun*, *dar šūš* true *Ḳirfa* (this word being the same as the *Karphea* of Herodotus) and *Ḳirfat al-Kar-anful*, 'clove *Ḳirfa*'. He mentions still another variety, 'known by its bad odor,' which he calls *zinzibar*, apparently our ginger. Obviously these trading terms cover various botanical species.

We cannot assume critical botanical knowledge among semi-savage peoples. The minute descriptions of fragrant gums suggest that the ancients classified them according to the size, shape, color and clearness of the piece, rather than the botanical orders of the trees that produced them. So, likewise, with the caravan traders who made their painful journey of seventy days along the hot sands of Arabia from Minaea to Aelana (140 shiftings of

<sup>42</sup> Antid. 1. 14.

<sup>43</sup> Vergil, *Georg.* 2. 139.

camel load at the best of it) :<sup>44</sup> what more probable than that the camel drivers should have the bag and the bundle in mind as the things to be handled, and that these very general terms should have been specifically applied in consequence to the substances which it paid them best to carry? A less crudely physical conception of holiness would perhaps have crowded out the senna first of all; a change from nomadic to agricultural habits would have increased the cultivation of fragrant grasses and brought in new aromatic plants for ceremonial use; and finally the laurel of India, for which the Roman Empire developed a craze and for which it was willing to pay any fabulous price asked,<sup>45</sup> would have appropriated to itself the ancient terms; cinnamon for the bundled bark, cassia for the treasured leaf, and curiously enough, by confusion with the senna pod and the less precious substances classified under the same name, for the woody parts of the *Cinnamomum* rather than the *μαλάβαθρον* or leaf.

We may guard against too specific an interpretation of these early trading terms by remembering the dragon's blood, or *κυννάβαρι*, a term growing likewise out of early animistic beliefs, which was applied by the Greeks and Romans indiscriminately to the gum of the Socotrine dracaena, the red oxide of iron, and the red sulphide of mercury. Pliny tells us of a Roman physician who thought he had prescribed the vegetable product,<sup>46</sup> but his patient took the Spanish ore and died!

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<sup>44</sup> Cf. Strabo, 16. 4. 25.

<sup>45</sup> Strabo, 16. 4. 4.

<sup>46</sup> Pliny, *H. N.* 33. 38; 8. 12.